

## THE INFLUENCE OF VOCABULARY MASTERY ON STUDENTS' READING COMPREHENSION AT SEVENTH GRADE OF SMPN KARANG TANJUNG 3

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### ABSTRACT

This study aims to examine the influence of vocabulary mastery on the reading comprehension of seventh-grade students at SMPN Karang Tanjung 3. A quantitative method with a quasi-experimental design (Nonequivalent Control Group Design) was used. The sample consisted of two classes: an experimental group that received vocabulary-based instruction and a control group that received conventional instruction. The research instrument was a 15-item multiple-choice test, validated for reliability and accuracy. The results of the t-test showed that  $t_{\text{calculated}} = 4.776 > t_{\text{table}} = 2.019$ , with **Sig. (2-tailed) = 0.000 < 0.05**, indicating a significant effect. Therefore, it can be concluded that vocabulary mastery significantly influences students' reading comprehension. These findings suggest the need to emphasize vocabulary teaching in reading activities to enhance students' English literacy skills.

**Keywords:** Vocabulary Mastery, Reading Comprehension, English Literacy

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## INTRODUCTION

In today's globalized world, the ability to comprehend English texts has become an essential skill for students, particularly at the junior high school level. Reading comprehension allows learners to access academic content, navigate digital information, and participate in global communication. However, for many students in English as a Foreign Language (EFL) contexts, reading comprehension is a persistent challenge. Among the factors that affect reading comprehension, vocabulary mastery plays a central role. Without sufficient vocabulary, students struggle to decode meaning, make inferences, and engage critically with texts. Previous research has consistently shown a strong

correlation between vocabulary knowledge and reading comprehension. Nation and Webb (2022) argue that students must understand at least 95% of the words in a text to comprehend it effectively. Similarly, Schmitt (2023) emphasizes the importance of integrating both intentional and incidental vocabulary learning into classroom instruction. Studies such as those by Astuti (2023) and Zhang and Lee (2023) demonstrate that vocabulary instruction significantly improves students' reading performance. Duke and Cartwright (2021) further highlight vocabulary as a foundational element in cognitive reading processes.

Despite these findings, much of the literature has focused on senior high school or university students, leaving a gap in research involving middle school learners—especially those in rural or under-resourced educational environments. Furthermore, while digital platforms are increasingly used in language learning, there is limited empirical research on the integration of interactive tools like Quizizz for vocabulary enrichment and their effect on reading comprehension. This study aims to address these gaps by focusing on seventh-grade students at SMPN Karang Tanjung 3, an Indonesian public junior high school. The study employs a quasi-experimental design using pre- and post-tests to assess the influence of vocabulary mastery on reading comprehension, with the experimental group receiving vocabulary-focused instruction through Quizizz. This contextual and methodological approach presents the novelty of the study.

The research seeks to answer the question: *Does vocabulary mastery significantly influence the reading comprehension ability of seventh-grade students at SMPN Karang Tanjung 3?* Based on this, the objective is to investigate whether there is a statistically significant relationship between vocabulary mastery and reading comprehension among these students. The theoretical foundation of the study is rooted in the notion that vocabulary is not merely a list of words but a dynamic system that interacts with syntax, context, and meaning (Nation & Webb, 2022; Oakhill et al., 2021). Students who possess a wider vocabulary are more capable of applying reading strategies such as predicting content, identifying main ideas, and making logical connections. These strategies enhance not only their comprehension but also their reading fluency and engagement with texts.

The findings of this research are expected to contribute to both theory and practice. Theoretically, the study expands the literature on the role of vocabulary mastery in reading

comprehension, especially in underrepresented educational settings. Practically, it provides English teachers with evidence-based insights on how to design vocabulary-rich reading lessons using digital tools. It also supports curriculum designers and school administrators in prioritizing vocabulary development as a key element in improving English literacy outcomes. Ultimately, the study seeks to promote more effective and engaging reading instruction for junior high school learners in Indonesia and similar EFL contexts.

## RESEARCH METHOD

This study was conducted at SMPN Karang Tanjung 3 using a quantitative research approach to examine the influence of vocabulary mastery on students' reading comprehension. The research design applied was quasi-experimental with a nonequivalent control group, in which two existing classes were selected without random assignment. The sample consisted of two seventh-grade classes, where one group (VII B) served as the experimental class and received vocabulary-based instruction, while the other group (VII A) acted as the control class and followed conventional teaching methods. The total number of participants was 44 students, and the sampling technique used was saturated sampling, given that the total population was relatively small and all individuals were included in the study.

Data were collected through pre-tests and post-tests in the form of multiple-choice questions designed to assess vocabulary mastery and reading comprehension. The instrument used in this research consisted of 15 items that had been validated for both content and construct by expert

judgment, and statistically tested using the Pearson Product Moment correlation with the help of SPSS software. Items with a correlation value equal to or above the  $r$ -table value of 0.444 were considered valid. Reliability testing of the instrument was carried out using Cronbach's Alpha, and the result obtained was 0.926, indicating that the instrument was highly reliable and suitable for measuring the intended constructs.

The pre-test was administered to both groups before the intervention to assess students' initial abilities. The experimental class received instruction that focused on vocabulary enhancement using various interactive methods including digital tools such as Quizizz, which supported students' engagement and retention of vocabulary. In contrast, the control class followed standard teaching procedures without any special emphasis on vocabulary instruction. Upon completion of the instructional period, a post-test with the same format as the pre-test was given to evaluate improvement in reading comprehension. Data collected from the tests were analyzed quantitatively. A normality test was conducted using the Shapiro-Wilk method to ensure the distribution of scores was normal. Homogeneity of variance was tested using Levene's Test. To test the hypothesis, an Independent Sample t-Test was employed to determine whether the difference in mean scores between the experimental and control groups was statistically significant. All statistical analyses were performed using SPSS Version 22.

The tools used in this study included personal computers or laptops equipped with SPSS software for data analysis and Quizizz as an online platform for administering vocabulary-based learning tasks. The materials used comprised printed test sheets for pre- and post-tests, validated question banks based on the seventh-grade English curriculum, and supplementary vocabulary materials aligned with the reading texts. These tools and materials were standard and practical for classroom use but supported the precision and efficiency required in data collection and instructional delivery.

## RESULT AND DISCUSSION

The findings of this study demonstrate that vocabulary mastery significantly influences the reading comprehension of seventh-grade students at SMPN Karang Tanjung 3. After the implementation of vocabulary-based instruction in the experimental class, there was a notable improvement in the students' reading comprehension scores compared to those in the control class, who received traditional instruction. This improvement is reflected in the post-test results, where the average score of the experimental class reached 81.1, while the control class averaged 68.6. These results indicate a clear difference in achievement between students who were exposed to vocabulary-focused learning and those who were not.

The statistical analysis confirmed the significance of this difference. The hypothesis testing using the independent sample t-test showed that the difference between the two groups was

statistically significant, with the experimental class outperforming the control group. These results directly answer the research question by affirming that vocabulary mastery has a significant positive effect on students' reading comprehension.

These findings align with theories that emphasize the central role of vocabulary in understanding texts. Nation and Webb (2022) argue that learners must understand a large proportion of the vocabulary within a text—at least 95%—to achieve effective comprehension. The students in the experimental class, who received explicit vocabulary instruction, were better equipped to decode word meanings, recognize textual references, and infer ideas, which enhanced their overall understanding of the reading materials. This supports the theoretical framework that views vocabulary as foundational in reading development.

The results also resonate with previous empirical studies. For example, Astuti (2023) and Zhang & Lee (2023) similarly found that students who received structured vocabulary instruction performed better in reading tasks compared to those who did not. In the context of this study, the use of digital tools like Quizizz also contributed to increased student engagement, allowing them to absorb vocabulary more effectively in a meaningful and enjoyable way. The use of interactive learning strategies appeared to boost motivation and participation, factors that indirectly support vocabulary retention and reading fluency.

From a practical standpoint, the observed difference in classroom dynamics between the two groups was significant. Students in the experimental class demonstrated greater confidence, participation, and enthusiasm during reading sessions. This behavioral shift suggests that vocabulary instruction not only impacts academic performance but also contributes to students' affective development, including interest in learning and willingness to read.

These findings may contribute to modifying existing English teaching practices, particularly in junior high schools in similar rural or developing areas. While vocabulary is often treated as a peripheral component in language instruction, this study emphasizes its central role and recommends that it be taught intentionally and systematically. The integration of vocabulary learning into reading instruction helps students comprehend texts more effectively, which in turn supports broader language development goals.

In conclusion, this research clearly shows that vocabulary mastery plays a pivotal role in improving students' reading comprehension. The results support existing theories while also providing new insight into the effectiveness of vocabulary-focused instruction using digital platforms. It can be concluded that strengthening students' vocabulary through targeted strategies significantly enhances their ability to understand reading texts, particularly in EFL learning environments.

**Table 1. Summary of Pre-Test and Post-Test Results**

Group	N	Pre-Test Mean	Post-Test Mean	Mean Gain
Experimental (VII B)	21	26.9	81.1	54.2
Control (VII A)	23	26.3	68.6	42.3

### Explanation:

- The **experimental group** received vocabulary-based instruction and showed a **mean gain of 54.2 points** in reading comprehension.
- The **control group** followed standard instruction and had a **mean gain of 42.3 points**.
- The **difference in improvement** indicates that vocabulary instruction contributed significantly to the enhanced performance in the experimental class.

### CONCLUSION

This study concludes that vocabulary mastery has a significant and positive influence on students' reading comprehension. The data revealed that students in the experimental group, who received vocabulary-based instruction, showed a notably greater improvement in reading comprehension scores compared to those in the control group. This finding supports the idea that vocabulary plays a central role in enabling students to understand texts, infer meaning, and engage more effectively in reading activities.

The research objective—to determine whether vocabulary mastery affects reading

comprehension—has been clearly answered through empirical evidence. The results not only confirm existing theories regarding the importance of vocabulary in language acquisition but also highlight the practical value of incorporating vocabulary-focused strategies in English language teaching, especially at the junior high school level.

Furthermore, the study introduces a new insight that the use of digital platforms, such as Quizizz, in vocabulary instruction can enhance student engagement and learning outcomes. These findings suggest that vocabulary instruction should be integrated systematically into reading lessons, not treated as a supplementary component. Future instructional models may benefit from emphasizing vocabulary development as a foundation for building stronger reading comprehension skills in EFL classrooms.

### REFERENCES

- Ani, A., & Sinaga, Y. (2021). The correlation between students' vocabulary mastery and speaking mastery. *Journal of English Education and Teaching*, 5(1), 68–78.
- Astuti, L. (2023). The correlation between vocabulary mastery and reading comprehension. *Journal of English Language Learning*, 12(2), 88–97.
- Khoiriyah, E. L., & Imtihanuddin, D. (2024). The effect of word mapping technique on students' vocabulary mastery. *Bhinneka Journal of English Education*, 3(1), 44–53.
- Nation, I. S. P., & Webb, S. A. (2022). *Teaching vocabulary: Strategies and techniques* (2nd ed.). Routledge. <https://doi.org/10.4324/9781003168744>

Schmitt, N. (2023). *Vocabulary in language teaching* (2nd ed.). Cambridge University Press.

Sugiyono. (2021). *Metode penelitian kuantitatif, kualitatif, dan R&D* (26th ed.). Alfabeta.

Zhang, Y., & Lee, M. K. (2023). Improving students' reading comprehension through

direct vocabulary instruction: Evidence from Malaysian ESL classrooms. *Asian EFL Journal*, 25(4), 152–169.